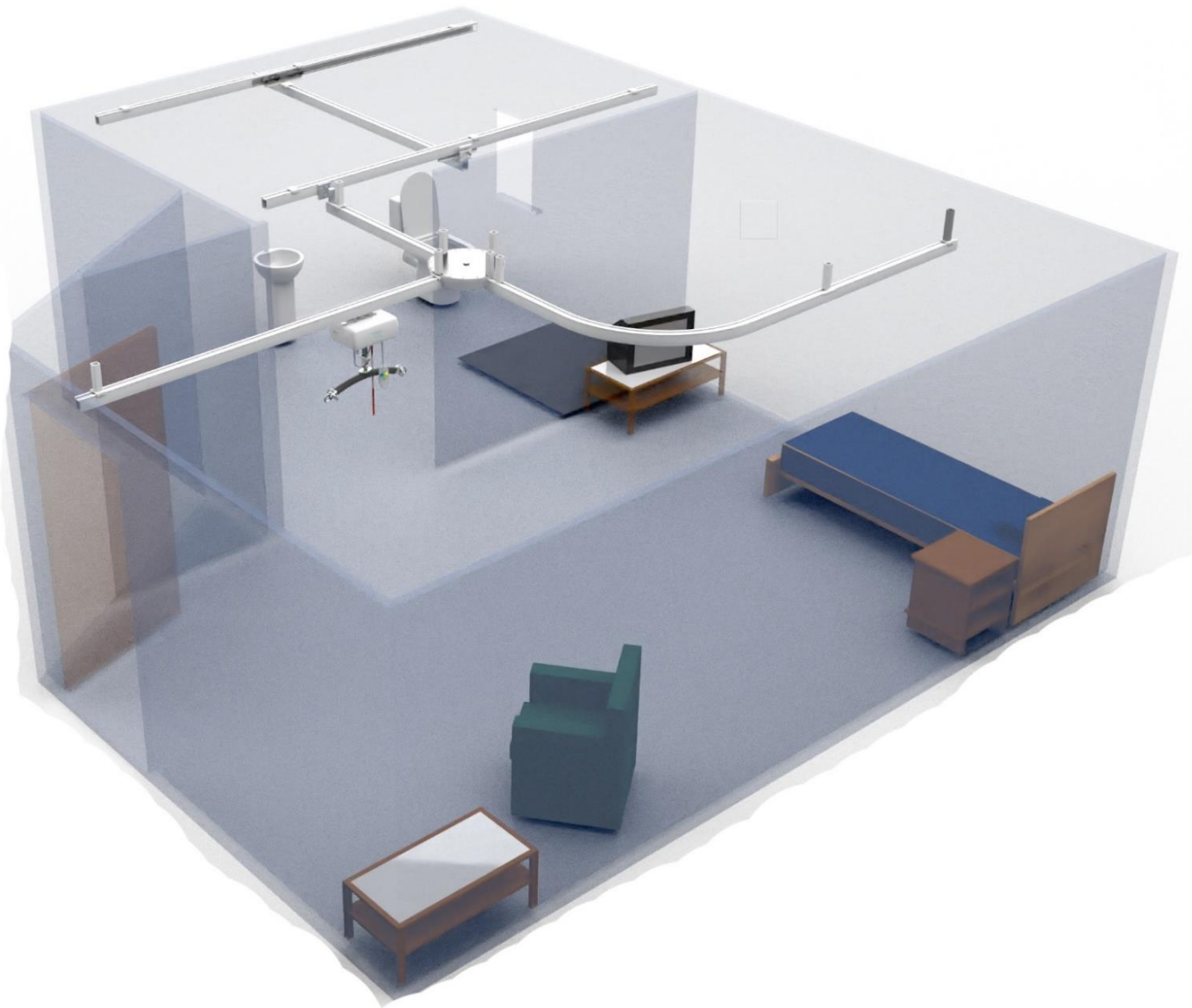


Ceiling Track Installation



Training Manual

1 Introduction

This document is intended to evaluate the competency of an individual when installing ceiling track systems. All engineers must complete and pass the requirements of this test before carrying out any install in the field.

The pass rate for this test is 80%. This must be achieved to proceed and you will be provided with a competency test certificate.

Before attempting the multiple choice below, ensure to have read and understood the following documentation.

- Ceiling Track Installation Manual

The questions below are based around these documents and the answers can be found within.

Please input your details in the table below:

Input in Block Capitals:

Forename	
Surname	
Job Title	
Company	
Years with Company	
Region	
Phone Number	
Email Address	

2 Competency Test

Make sure to answer each question below. Each question accounts to 1 mark. Underline the correct answer.

2.1 Track Types

1. *What is the maximum spanning distance between two ceiling fixings for the Single Track at 270kg SWL?*
 - A) 3 ft 11" (1.2m)
 - B) 4 ft 11" (1.5m)
 - C) 6 ft 7" (2.0m)
 - D) 7ft 3" (2.2m)

2. *What is the maximum spanning distance between two ceiling fixings for the Heavy-Duty Track at 270kg SWL?*
 - A) 13ft 1" (4m)
 - B) 16ft 5" (5m)
 - C) 19 ft 8" (6m)
 - D) 22 ft 11" (7m)

3. *What is the purpose of the Double Track?*
 - A) To increase spanning distance while maintaining maximum lifting range
 - B) To increase the spanning distance
 - C) To decrease the amount of ceiling fixings
 - D) Doubles track lifting capacity

4. *What is the purpose of the Inset Track?*
 - A) For gantry installations
 - B) Aesthetics
 - C) Increased spanning distances
 - D) For transition gate track systems

5. *What is the maximum overhang permitted from the final fixing on all track types during standard ceiling installations?*
- A) 3.93" (100mm)
 - B) 7.87" (200mm)
 - C) 9.84" (250mm)
 - D) 11.81" (300mm)
6. *How many fixings are required for a 90° track bend? (when unmodified)*
- A) 3
 - B) 4
 - C) 5
 - D) 6
7. *Which of the below statements are true about track bends?*
- A) *Track bends must never be fixed up against the wall*
 - B) *Track bends must always be installed prior to any straight track*
 - C) *The track bend requires a minimum of 100mm straight section at either end of the bend.*
 - D) *The track bend must never be installed as a runoff track for a turntable.*
8. *What track types are available in bends?*
- A) *Single track*
 - B) *Double track*
 - C) *Heavy-duty track*
 - D) *All of the above*

9. Under which circumstance should a 110mm track bracket be used during a ceiling track installation?

- A) For every track fixing to the ceiling
- B) For two track sections to be fitted together
- C) For the transition gate fixed track only
- D) For turntable track fixings

10. What is the purpose of a track bracket spacer

- A) To decrease the height of the track system
- B) To increase the height of the track system
- C) To simplify the installation of the track
- D) To align the track system horizontally

11. How many track wedges are required for the 110mm track bracket?

- A) 1
- B) 2
- C) 3
- D) 4

2.2 Concrete Installations

1. What is the preferred method of installing onto a concrete ceiling?

- A) Chemical Resin
- B) Zykon Fixings
- C) Neither

2. What type of concrete must a Zykon fixing be installed into?

- A) Solid concrete
- B) Hollow concrete

3. *What is the minimum thickness of concrete required for a Zykon fixing?*
- A) 0.78" (20mm)
 - B) 1.77" (45mm)
 - C) 1.97" (50mm)
 - D) 2.55" (65mm)
4. *What is the minimum thickness of concrete required to fix a threaded bar using chemical resin before the concrete reaches a hollow state?*
- A) 0.78" (20mm)
 - B) 1.57" (40mm)
 - C) 1.97" (50mm)
 - D) 2.55" (60mm)
5. *What colour should the mix of Fischer FIS-VL 410C chemical resin be during use?*
- A) White
 - B) Light Grey
 - C) Dark Grey
 - D) Black
6. *Once the threaded bar has been secured to the ceiling using chemical resin, what must be done next?*
- A) Allow the chemical resin time to cure
 - B) Install the track
 - C) Test the strength of the fixing
 - D) Attach the box section and steel channel between the fixings

- 7.** *What size threaded bar should be used for all concrete ceiling fixings?*
- A) *M8*
 - B) *M10*
 - C) *M12*
 - D) *M14*
- 8.** *When should lateral supports be added to the installation to provide additional support to the fixing?*
- A) *When a 7.87" (200mm) void is present*
 - B) *When a 19.69" (500mm) void is present*
 - C) *When a 27.56" (700mm) void is present*
 - D) *When a 39.37" (1000mm) void is present*
- 9.** *When should a double steel channel be used?*
- A) *When the distance between the two ceiling fixings are 23.62" (600mm) and above*
 - B) *When the distance between the two ceiling fixings are 31.5" (800mm) and above*
 - C) *When the distance between the two ceiling fixings are 39.37" (1000mm) and above*
 - D) *When the distance between the two ceiling fixings are 47.24" (1200mm) and above*
- 10.** *Where MUST Loctite be used during a singular fixing assembly?*
- A) *Every nut throughout the installation*
 - B) *Where the threaded bar is inserted into the spring channel washer*
 - C) *Where the threaded bar is inserted into the Zykon fixing*
 - D) *To the half nut on the underside of the track bracket*

2.3 Timber

- 1.** *What is the minimum joist size permitted when installing a track system perpendicularly to the joist?*

 - A) *5" x 2"*
 - B) *6" x 3"*
 - C) *7" x 3"*
 - D) *4" x 3"*

- 2.** *What is the minimum joist size permitted when installing a track system in parallel with the joist?*

 - A) *5" x 2"*
 - B) *6" x 3"*
 - C) *7" x 3"*
 - D) *4" x 3"*

- 3.** *When the track runs parallel with the joists, how many joists must the steel channel span across from either side of the fixing*

 - A) *One joist*
 - B) *Two joists*
 - C) *Three joists*
 - D) *Four joists*

- 4.** *What should be done when an obstacle such as piping obstructs the ceiling installation process?*

 - A) *Relocate the track system to a more suitable location within the room*
 - B) *Attempt to bridge across the obstruction using steel channel*
 - C) *Remove the obstacle and relocate elsewhere*
 - D) *Miss out the fixing point affected*

5. How should the joist hanger brackets be secured to the joists?
- A) Threaded bar
 - B) Wood screws
 - C) Zykon fixings
 - D) Coach bolts
6. When fixing joist brackets, what should be done when the maximum fixing span does not align with a joist?
- A) Fix the joist bracket to the nearest joist
 - B) Fix the joist bracket to the previous joist passed
 - C) Find another method of fixing the joist bracket to the ceiling
 - D) Install a noggin between the joist to create a joist bracket fixing point
7. When fixing directly into the joist, what size coach bolt should be used?
- A) 10.0 x 50
 - B) 10.0 x 100
 - C) 12.0 x 50
 - D) 12.0 x 100
8. When the track is running parallel with the joists, is it permitted for the track system to suspend from a singular joist?
- A) Yes
 - B) No

2.4 Steelworks Installation

1. Which of the below is not a method of fixing a track bracket to a steel beam?
 - A) Window bracket
 - B) Beam clamp
 - C) Zykon fixing
 - D) Flange Clamp

2. Which fixing method is used to install a track system onto a C-Section beam?
 - A) Window bracket
 - B) Beam clamp
 - C) Zykon fixing
 - D) Flange clamp

3. When should lateral supports be added to the steelwork installation to provide additional support to the fixing?
 - A) When a 7.87" (200mm) void is present
 - B) When a 19.69" (500mm) void is present
 - C) When a 27.56" (700mm) void is present
 - D) When a 39.37" (1000mm) void is present

4. "The spanning distances between each fixing increases during a steelwork installation". True or false?
 - A) True
 - B) False

5. When the track is running parallel with the beam, is it permitted for the track system to suspend from a singular beam?
 - A) Yes
 - B) No

2.5 Wall and Gantry Installation

1. *What track types are permitted for wall to wall fixings?*
 - A) *All track types*
 - B) *Straight track only*
 - C) *Track bends only*
 - D) *Heavy-duty track only*

2. *What is the minimum required thickness of the wall to provide a secure wall fixing?*
 - A) *0.79" (20mm)*
 - B) *1.57" (40mm)*
 - C) *1.97" (50mm)*
 - D) *2.76" (70mm)*

3. *For specialist wall or gantry fixings, what is used to increase the spanning distance of the ceiling track?*
 - A) *Double heavy-duty track*
 - B) *Lateral supports*
 - C) *Side hanging steel box section*
 - D) *All of the above*

4. *"The singular gantry leg is permitted to be fixed into a stud wall". True or false?*
 - A) *True*
 - B) *False*

5. *What is the minimum thickness required of the wall for the singular gantry leg wall fixings?*
 - A) *0.47" (12mm)*
 - B) *0.87" (22mm)*
 - C) *1.26" (32mm)*
 - D) *1.65" (42mm)*

2.6 Turntable Installation

1. Which of the below do the manual and powered turntables not have in common?
 - A) Aluminium base plate
 - B) The Safe Working Load
 - C) 17.72" (450mm) diameter
 - D) Fourteen track take off positions

2. How many ceiling fixings does the turntable require?
 - A) One fixing
 - B) Two fixings
 - C) Four fixings
 - D) Six fixings

3. What track type is compatible with the turntable?
 - A) Straight single track
 - B) Straight and bend single track
 - C) Straight inset track
 - D) Heavy duty track

4. "Turntables cannot be fixed directly onto the joists". True or false?
 - A) True
 - B) False

5. What is the required gap between the turntable track and the run-off track to allow the turntable to rotate?
 - A) 0.04" (1mm)
 - B) 0.08" (2mm)
 - C) 0.12" (3mm)
 - D) 0.16" (4mm)

2.7 H-System Installation

1. *What is the maximum spanning distance of the double track when installed onto a h-system?*
 - A) *9 ft 10" (3m)*
 - B) *14ft 9" (4.5m)*
 - C) *16 ft 5" (5m)*
 - D) *Depends on the safe working load of the installed product*

2. *"The double track is the only suitable track type to be used as the h-system moving track". True or false?*
 - A) *True*
 - B) *False*

3. *What size track brackets are used with the h-system trolleys?*
 - A) *55mm track bracket*
 - B) *110mm track bracket*

4. *"It is essential that the h-system fixed tracks are parallel for the moving track to traverse smoothly". True or false?*
 - A) *True*
 - B) *False*

2.8 Transition Gate Installation

1. *What is the maximum overhang permitted for the h-system moving track when used with a transition gate?*
 - A) 3.15" (80mm)
 - B) 4.92" (125mm)
 - C) 7.87" (200mm)
 - D) 9.84" (250mm)

2. *What is the maximum overhang permitted for the fixed track when used with a transition gate?*
 - A) 3.15" (80mm)
 - B) 4.92" (125mm)
 - C) 7.87" (200mm)
 - D) 9.84" (250mm)

3. *What is the required transition gap between the moving and fixed track?*
 - A) 0.04" – 0.08" (1mm – 2mm)
 - B) 0.08" – 0.12" (2mm – 3mm)
 - C) 0.12" – 0.16" (3mm – 4mm)
 - D) 0.16" – 0.20" (4mm – 5mm)

4. *What is required at the first track fixing of the fixed track?*
 - A) 110mm slotted track bracket
 - B) 110mm unthreaded track bracket
 - C) 55mm slotted track bracket
 - D) Drop down bracket

5. *"The fixed track will require 40x40 white box section at each fixing location". True or false?*
 - A) True
 - B) False

2.9 Testing

1. *What is the correct load testing percentage?*
 - A) *75% the SWL*
 - B) *100% the SWL*
 - C) *125% the SWL*
 - D) *150% the SWL*

2. *What does the testing SWL depend on?*
 - A) *The SWL of the product*
 - B) *The SWL of the track*
 - C) *The material the installation is installed into. (timber or concrete)*
 - D) *The type of fixing used to install the track. (Zykon, chemical resin, coach bolt)*

3. *What must be tested after installation?*
 - A) *The ceiling tracks only*
 - B) *Ceiling tracks and turntables only*
 - C) *Ceiling tracks, turntables and transition gates only*
 - D) *All types track systems that have been installed*

4. *Who must be present during the testing procedure?*
 - A) *Another installer*
 - B) *A supervisor*
 - C) *The client*
 - D) *Nobody*

3 Results

To complete the competence test, please scan and forward the completed form to both:

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jamie.wallis@prismmedical.co.uk

Once received and marked, you will receive a competency test certificate if the pass grade has been achieved. This certificate will approve you to install ceiling track systems until the refresher course is required.

Dealer/service contact details:

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54 West Industrial Drive
O'Fallon, MO 63366 USA
314-889-1000
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